

## AMENDMENTS TO THE CLAIMS

### Listing of Claims:

- 1-6. (Cancelled)
7. (Currently amended) A method for identifying a gamma secretase ~~modulator~~ inhibitor comprising the following steps:
- a) ~~identifying of a fatty acid  $\Delta$ 6 desaturase (FADS2) interacting molecule by~~  
determining whether a given test compound binds to a fatty acid  $\Delta$ 6 desaturase (FADS2), and
- b) ~~[[.]] determining whether the FADS2-interacting molecule of compound identified in~~  
step a) is capable of modulating inhibiting gamma secretase activity, thereby identifying a gamma secretase inhibitor.
8. (Previously presented) The method of claim 7, wherein in step a) the test compound is brought into contact with FADS2 and the interaction of FADS2 with the test compound is determined.
9. (Previously presented) The method of claim 8, wherein the interaction of the test compound with FADS2 results in an inhibition of FADS2 activity.
10. (Previously presented) The method of claim 7, wherein in step b) the ability of the gamma secretase to cleave amyloid precursor protein(APP) is measured.
- 11-68. (Cancelled)
69. (New) The method of claim 7, wherein the FADS2 comprises an amino acid sequence having at least 90% sequence identity to SEQ ID NO: 76.
70. (New) The method of claim 7, wherein the FADS2 comprises an amino acid sequence having at least 95% sequence identity to SEQ ID NO: 76.
71. (New) The method of claim 7, wherein the FADS2 comprises the amino acid sequence depicted in SEQ ID NO: 76.